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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,050	06/04/2002	Hai-Jui Lin	AVIP0024USA	9788

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EXAMINER	
THOMPSON, JAMES A	

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/064,050	LIN ET AL.	
	Examiner	Art Unit	
	James A. Thompson	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 May 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8 and 10-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 June 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 7, lines 2-7, filed 12 May 2006, with respect to the rejection of claims 1-7 under 35 USC §112, 2nd paragraph have been fully considered and are persuasive. The rejection of claims 1-7 under 35 USC §112, 2nd paragraph listed in items 2-3 of the previous office action, dated 05 December 2005 and mailed 12 December 2005, has been withdrawn.

2. Applicant's arguments filed 12 May 2006 have been fully considered but they are not persuasive.

Applicant's amendments to the claims have been fully considered and are addressed in detail below. Applicant's discussion with respect to the alleged differences between the presently amended claims has also been fully considered. The claims as presently recited are rejected based on prior art below. New grounds of rejection have been necessitated by the amendments to the claims, particularly with respect to the presently amended limitation "moving to a plurality of positions on the track", found in claim 1 and similarly found in claim 8, and the reconsideration and reinterpretation of the claims and the prior art references that these amendments require.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3-8 and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orito (US Patent 6,072,912) in view of Toyofuku (US Patent 5,289,000).

Regarding claim 1: Orito discloses:

- providing a scanner (figure 4 of Orito) containing a housing (figure 4(31) and column 5, lines 16-25 of Orito) comprising a transparent platform (figure 4(below 43) of Orito) positioned within the housing for placing the document thereon (column 5, lines 41-48 of Orito). A transparent platform, while not specifically mentioned, is inherently within the housing and is used to place the document thereon since, without some form of platform, there is nothing upon which the document can rest and be scanned and, if said platform is not transparent, the light generated by the irradiation lamp cannot pass through said platform to be reflected by the mirror and read by the image sensor (column 5, lines 41-48 of Orito).
- projecting light on the document (column 5, lines 41-45 of Orito) with a light-distributing device (figure 4(52) of Orito) positioned below the transparent platform (as clearly seen in figure 4 of Orito).
- light is generated from the light-distributing device and passes through the transparent platform (column 5, lines 41-45 of Orito). As discussed above, the existence of said transparent platform, which would pass light from the

light-distributing device, is inherent in the system of Orito.

- generating a corresponding calibration signal (white level data) when no document is positioned on the transparent platform (column 7, lines 45-52 of Orito).
- using the calibration signal, which is generated from the scanning module according to a plurality of positions (figure 8 and column 7, lines 48-58 of Orito) without the document positioned on the transparent platform (column 7, lines 41-50 of Orito), to amplify or decay (column 9, lines 39-45 of Orito) the scan signal generated by the scanning module (column 9, lines 53-65 of Orito) when the document is positioned on the transparent platform to be scanned (column 9, lines 34-43 of Orito) and when the scanning module reaches the corresponding plurality of positions to scan the document (column 9, lines 8-12 of Orito).

Orito does not disclose expressly that said transparent platform is positioned *on* the housing; a track positioned inside the housing parallel with a scanning direction of the scanner; that said light-distributing device is positioned *above* said transparent platform; moving the scanning module along the track for sensing light; and that said calibration signal is generated from the scanning module *moving* to said plurality of positions *on the track*.

Toyofuku discloses:

- a transparent platform that is positioned on the housing (figure 1(22) and column 7, lines 37-41 of Toyofuku).
- a track (figure 2 of Toyofuku) positioned inside the housing (as shown by the fact that figure 1(31) of Toyofuku, which is driven by the track, is inside the

housing) parallel with a scanning direction of the scanner (column 12, lines 29-41 of Toyofuku).

- a light-distributing device (figure 1(102) and column 11, lines 45-53 of Toyofuku) that is positioned above said transparent platform (as clearly shown in figure 1 of Toyofuku).
- a scanning module (figure 1(31) of Toyofuku) that is moved along the track for sensing the light passing through the document and generating a corresponding scan signal (column 12, lines 3-17 of Toyofuku).

Orito and Toyofuku are combinable because they are from the same field of endeavor, namely the procuring of digital image data through the high-quality digital scanning of hardcopy documents. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the method of scanned image data correction taught by Orito using the specific scanner taught by Toyofuku. Furthermore, by this combination, the calibration signal generated at a plurality of positions, which is taught by Orito, would be generated from the scanning module moving to said plurality of positions on the track, as taught by Toyofuku. The motivation for doing so would have been that a scanner physically designed in the specific manner in which the scanner of Toyofuku is designed to be capable of reading transparencies (column 1, lines 9-18 of Toyofuku), which would generally be recognized to be desirable since this increases the overall functionality of the device. Therefore, it would have been obvious to combine Toyofuku with Orito to obtain the invention as specified in claim 1.

Regarding claim 3: Orito discloses that the scan signal is amplified by a correction factor ($FF(hex)/(W(n)-B(n))$) when the scan signal is weaker than a standard value (column 9, lines 34-43 of Orito), and the scan signal approaches the standard value after being amplified by the correction factor (column 9, lines 34-43 of Orito). If correction is performed such that $FF(hex)/(W(n)-B(n))$ is greater than 1, then $FF(hex)/(W(n)-B(n))$ is an amplification value.

Regarding claim 4: Orito discloses that the scan signal is decayed by a correction factor ($FF(hex)/(W(n)-B(n))$) when the scan signal is stronger that a standard value (column 9, lines 34-43 of Orito), and the scan signal approaches the standard value after being decayed by the correction factor (column 9, lines 34-43 of Orito). If correction is performed such that $FF(hex)/(W(n)-B(n))$ is less than 1, then $FF(hex)/(W(n)-B(n))$ is a decaying value.

Regarding claim 5: Orito discloses recording the calibration signal (column 7, lines 58-60 and column 8, lines 11-13 of Orito).

Regarding claim 6: Orito discloses:

- the scanning module comprises a plurality of sensors (column 5, lines 48-52 of Orito), and each sensor is used for sensing the light projecting on the scanning module to generate a corresponding pixel-scan-signal so that the scan signal generated from the scanning module comprises a plurality of pixel-scan-signals generated from the sensors (column 5, lines 52-62 of Orito).
- amplifying the pixel-scan-signal generated from one of the sensors with corresponding correction factor

$(FF(hex)/(W(n)-B(n)))$ when the pixel-scan-signal is weaker than a standard value (column 9, lines 34-43 of Orito). If correction is performed such that $FF(hex)/(W(n)-B(n))$ is greater than 1, then $FF(hex)/(W(n)-B(n))$ is an amplification value.

- decaying the pixel-scan-signal generated from one of the sensors with the corresponding correction factor $(FF(hex)/(W(n)-B(n)))$ when the pixel-scan-signal is stronger than the standard value (column 9, lines 34-43 of Orito). If correction is performed such that $FF(hex)/(W(n)-B(n))$ is less than 1, then $FF(hex)/(W(n)-B(n))$ is a decaying value.

Regarding claim 7: Orito discloses:

- each sensor generating a corresponding calibration signal when no document is positioned on the transparent platform (column 7, lines 41-52 of Orito).
- determining the correction factor $(FF(hex)/(W(n)-B(n)))$ of the pixel-scan-signal (column 9, lines 34-43 of Orito), which is generated from the scanning module scanning the document at a first position on the track (column 9, lines 8-12 and lines 34-39 of Orito), according to the corresponding pixel-calibration-signal generated from the sensor of the scanning module located at the first position on the track when no document is positioned on the transparent platform (column 9, lines 34-45 of Orito).

Orito does not disclose expressly moving the scanning module along the track for sensing light, which is generated from the light-distributing device and passes through the transparent platform.

Toyofuku discloses:

- moving the scanning module along the track for sensing light (column 12, lines 4-14 of Toyofuku), which is generated from the light-distributing device and passes through the transparent platform (column 12, lines 9-17 of Toyofuku).

Orito and Toyofuku are combinable because they are from the same field of endeavor, namely the procuring of digital image data through the high-quality digital scanning of hardcopy documents. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the method of scanned image data correction taught by Orito using the specific scanner taught by Toyofuku. The motivation for doing so would have been that a scanner physically designed in the specific manner in which the scanner of Toyofuku is designed is capable of reading transparencies (column 1, lines 9-18 of Toyofuku). Therefore, it would have been obvious to combine Toyofuku with Orito to obtain the invention as specified in claim 7.

Regarding claim 8: Orito discloses a scanner (figure 4 of Orito) comprising:

- a housing (figure 4(31) and column 5, lines 16-19 of Orito) comprising a transparent platform (figure 4 (below 43) of Orito) positioned within the housing for placing the document thereon (column 5, lines 41-48 of Orito). A transparent platform, while not specifically mentioned, is inherently within the housing and is used to place the document thereon since, without some form of platform, there is nothing upon which the document can rest and be scanned and, if said platform is not transparent, the light

generated by the irradiation lamp cannot pass through said platform to be reflected by the mirror and read by the image sensor (column 5, lines 41-48 of Orito).

- a light-distributing device (figure 4(52) of Orito) positioned below the transparent platform (as clearly seen in figure 4 of Orito) for projecting light on the document (column 5, lines 41-45 of Orito).
- a scanning module (figure 4(54) of Orito) for sensing the light reflecting from the document and generating a corresponding scan signal (column 5, lines 45-55 of Orito).
- a processor (figure 5(71) of Orito) circuit for controlling the scan signal.
- light is generated from the light-distributing device and passes through the transparent platform (column 5, lines 41-45 of Orito). As discussed above, the existence of said transparent platform, which would pass light from the light-distributing device, is inherent in the system of Orito.
- the scanner generates a corresponding calibration signal (white level data) when no document is positioned on the transparent platform (column 7, lines 45-52 of Orito).
- the processing circuit uses the calibration signal, which is generated from the scanning module according to a plurality of positions (figure 8 and column 7, lines 48-58 of Orito) without the document positioned on the transparent platform (column 7, lines 41-50 of Orito), to amplify or decay (column 9, lines 39-45 of Orito) the scan signal generated by the scanning module (column 9, lines 53-65 of Orito) when the scanning module reaches the

corresponding plurality of positions for scanning the document (column 9, lines 8-12 of Orito) which is positioned on the transparent platform (column 9, lines 34-43 of Orito).

Orito does not disclose expressly that said transparent platform is positioned *on* the housing; that said light-distributing device is positioned *above* said transparent platform; a track positioned inside the housing parallel with a scanning direction of the scanner; that said scanning module is movably positioned on the track and moves along the track for sensing light; and that said calibration signal is generated from the scanning module *moving* to said plurality of positions *on the track*.

Toyofuku discloses:

- a transparent platform positioned on the housing (figure 1(22) and column 7, lines 37-41 of Toyofuku).
- a light-distributing device (figure 1(102) and column 11, lines 45-53 of Toyofuku) positioned above said transparent platform (as clearly shown in figure 1 of Toyofuku).
- a track (figure 2 of Toyofuku) positioned inside the housing (as shown by the fact that figure 1(31) of Toyofuku, which is driven by the track, is inside the housing) parallel with a scanning direction of the scanner (column 12, lines 29-41 of Toyofuku).
- a scanning module (figure 1(31) of Toyofuku) movably positioned on the track and that moves along the track for sensing light (column 12, lines 3-17 of Toyofuku).

Orito and Toyofuku are combinable because they are from the same field of endeavor, namely the procuring of digital image data through the high-quality digital scanning of hardcopy

documents. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the method of scanned image data correction taught by Orito using the specific scanner taught by Toyofuku. Furthermore, by this combination, the calibration signal generated at a plurality of positions, which is taught by Orito, would be generated from the scanning module moving to said plurality of positions on the track, as taught by Toyofuku. The motivation for doing so would have been that a scanner physically designed in the specific manner in which the scanner of Toyofuku is designed to be capable of reading transparencies (column 1, lines 9-18 of Toyofuku), which would generally be recognized to be desirable since this increases the overall functionality of the device. Therefore, it would have been obvious to combine Toyofuku with Orito to obtain the invention as specified in claim 8.

Regarding claim 10: Orito discloses that the processing circuit amplifies the scan signal by a correction factor $(FF(hex)/(W(n)-B(n)))$ when the scan signal is weaker than a standard value (column 9, lines 34-43 of Orito), and the scan signal approaches the standard value after being amplified by the correction factor (column 9, lines 34-43 of Orito). If correction is performed such that $FF(hex)/(W(n)-B(n))$ is greater than 1, then $FF(hex)/(W(n)-B(n))$ is an amplification value.

Regarding claim 11: Orito discloses that the processing circuit decays the scan signal by a correction factor $(FF(hex)/(W(n)-B(n)))$ when the scan signal is stronger that a standard value (column 9, lines 34-43 of Orito), and the scan signal approaches the standard value after being decayed by the correction factor (column 9, lines 34-43 of Orito). If

correction is performed such that $FF(hex)/(W(n)-B(n))$ is less than 1, then $FF(hex)/(W(n)-B(n))$ is a decaying value.

Regarding claim 12: Orito discloses a recording circuit (figure 5(73) of Orito) for storing the calibration signal (column 7, lines 58-60 and column 8, lines 11-13 of Orito).

Regarding claim 13: Orito discloses that the scanner (figure 1(30) of Orito) is connected to a computer (figure 1(10) of Orito), and the calibration signal is stored in the computer (column 7, lines 11-16 of Orito).

Regarding claim 14: Orito discloses that the scanning module comprises a plurality of sensors (column 5, lines 48-52 of Orito), each sensor is used for sensing the light projecting on the scanning module to generate a corresponding pixel-scan-signal, the scan signal generated from the scanning module comprises a plurality of pixel-scan-signals generated from the sensors (column 5, lines 52-62 of Orito), and the processing circuit amplifies and decays pixel-scan-signals generated from different sensors with corresponding correction factors ($FF(hex)/(W(n)-B(n))$ for each n) after comparing the pixel-scan-signals with a standard value (column 9, lines 34-43 of Orito). If correction is performed such that $FF(hex)/(W(n)-B(n))$ is greater than 1, then $FF(hex)/(W(n)-B(n))$ is an amplification value. If correction is performed such that $FF(hex)/(W(n)-B(n))$ is less than 1, then $FF(hex)/(W(n)-B(n))$ is a decaying value.

Regarding claim 15: Orito discloses that the scanning module uses each sensor for generating a corresponding pixel-calibration-signal when no document is positioned on the transparent platform (column 7, lines 41-52 of Orito); and the processing circuit determines the correction factor

$(FF(hex)/(W(n)-B(n)))$ of the pixel-scan-signal (column 9, lines 34-43 of Orito), which is generated from the scanning module scanning the document at a first position on the track (column 9, lines 8-12 and lines 34-39 of Orito), according to the corresponding pixel-calibration-signal generated from the sensor of the scanning module located at the first position on the track when no document is positioned on the transparent platform (column 9, lines 34-45 of Orito).

Orito does not disclose expressly that the scanning module moves along the track for sensing light which is generated from the light-distributing device and passes through the transparent platform.

Toyofuku discloses moving the scanning module along the track for sensing light (column 12, lines 4-14 of Toyofuku), which is generated from the light-distributing device and passes through the transparent platform (column 12, lines 9-17 of Toyofuku).

Orito and Toyofuku are combinable because they are from the same field of endeavor, namely the procuring of digital image data through the high-quality digital scanning of hardcopy documents. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the method of scanned image data correction taught by Orito using the specific scanner taught by Toyofuku. The motivation for doing so would have been that a scanner physically designed in the specific manner in which the scanner of Toyofuku is designed is capable of reading transparencies (column 1, lines 9-18 of Toyofuku). Therefore, it would have been obvious to combine Toyofuku with Orito to obtain the invention as specified in claim 15.

Conclusion

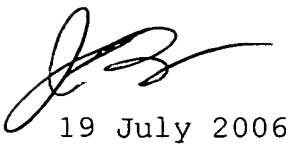
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

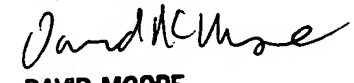
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



19 July 2006

James A. Thompson
Examiner
Technology Division 2625



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